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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,358	03/25/2005	Derk Reefman	NL 020908	6173
24737	7590	05/10/2006	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			WAMSLEY, PATRICK G	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/529,358

Applicant(s)

REEFMAN ET AL.

Examiner

Patrick G. Wamsley

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/27/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed on 04/20/2006 have been fully considered but they are not persuasive.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: -- Sigma Delta Modulator Having Both High and Low Order Filters --.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,585,801 to Thurston.

Thurston discloses a $\Sigma\Delta$ modulator [col. 1, line 9] comprising at least two parallel filters [on paths 5a and 5b], each receiving an input signal [3], a gain device [7] for controlling a weight associated with an output and a quantizer [1]. Claim 4 restates these apparatus limitations in method format.

Applicant argues that Thurston's "limiting means" prevents a signal from increasing above a given value, evidence that it performs a gain function, setting a limit on the amplitude. The examiner agrees that Thurston's gain device [7] does not amplify the output with a positive gain value, but applicant has not claimed an amplifier. Instead, given that applicant is arguing for a broad interpretation of the claims, a gain device would encompass such devices as amplifiers, attenuators, and limiters, including the gain device [7] disclosed by Thurston.

Regarding the definition of the term "gain device," U.S. Patent 4,155,047 to Rubens indicates that this term may be applied to both amplifiers and attenuators [col. 2, lines 65-68]. U.S. Patent 5,931,891 to Landry indicates that limiters are generally constructed using a gain device [col. 5, lines 43-45]. U.S. Patent 6,448,860 to Wolter et al uses a limiter to reduce the gain of a device [col. 10, line 1]. U.S. Patent 6,735,423 to Uskali et al applies attenuator values to gain devices [col. 3, lines 6-9]. Thus, it's evident that limiters and attenuators qualify as gain devices.

For claims 2 and 5, Thurston provides a feedback loop [2] from the quantizer [1].

For claims 3 and 6, Thurston provides a higher order filter on a first path [5b] and a lower order filter on a second path [5a].

For claim 7, Thurston discloses input $[V_{in}]$ and output $[V_{out}]$ signals.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,142,286 to Ribner et al couples an amplitude-scaling element [46: Fig. 3A] to first order [40] and second order [30] $\Sigma\Delta$ modulators.

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U.S. Patent 5,243,345 to Naus et al discloses a $\Sigma\Delta$ modulator having weighting amplifiers [16.1/16.2] coupled to different sections [6.1/6.2]. U.S. Patent 5,949,361 to Fischer et al applies a scaling factor [col. 6, line 49] to third order [52a: Fig. 3] and second order [152] stages in a $\Sigma\Delta$ modulator.

Applicant's amendment necessitated the revised grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick G. Wamsley whose telephone number is (571) 272-1814. The official facsimile number is (571) 273-8300. An alternate facsimile number, (571) 273-1814, should only be used for unofficial documents.


Patrick G. Wamsley

May 9, 2006

Application No: 10/529,358
Attorney's Docket No: NL 020908

APPENDIX A: Replacement Drawing Sheet

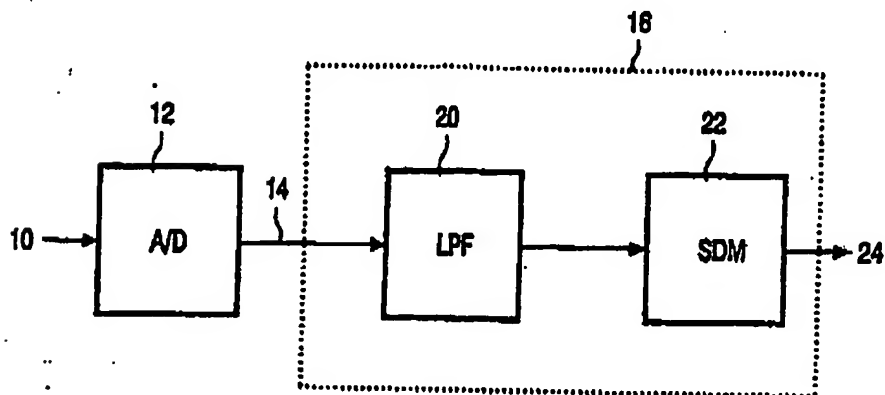


FIG. 1
(PRIOR ART)

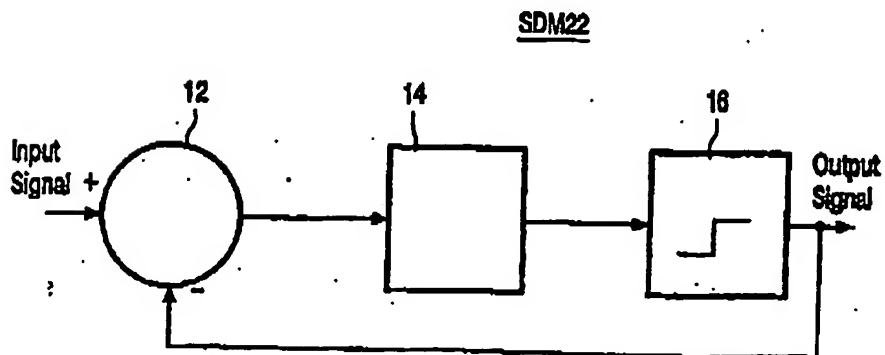
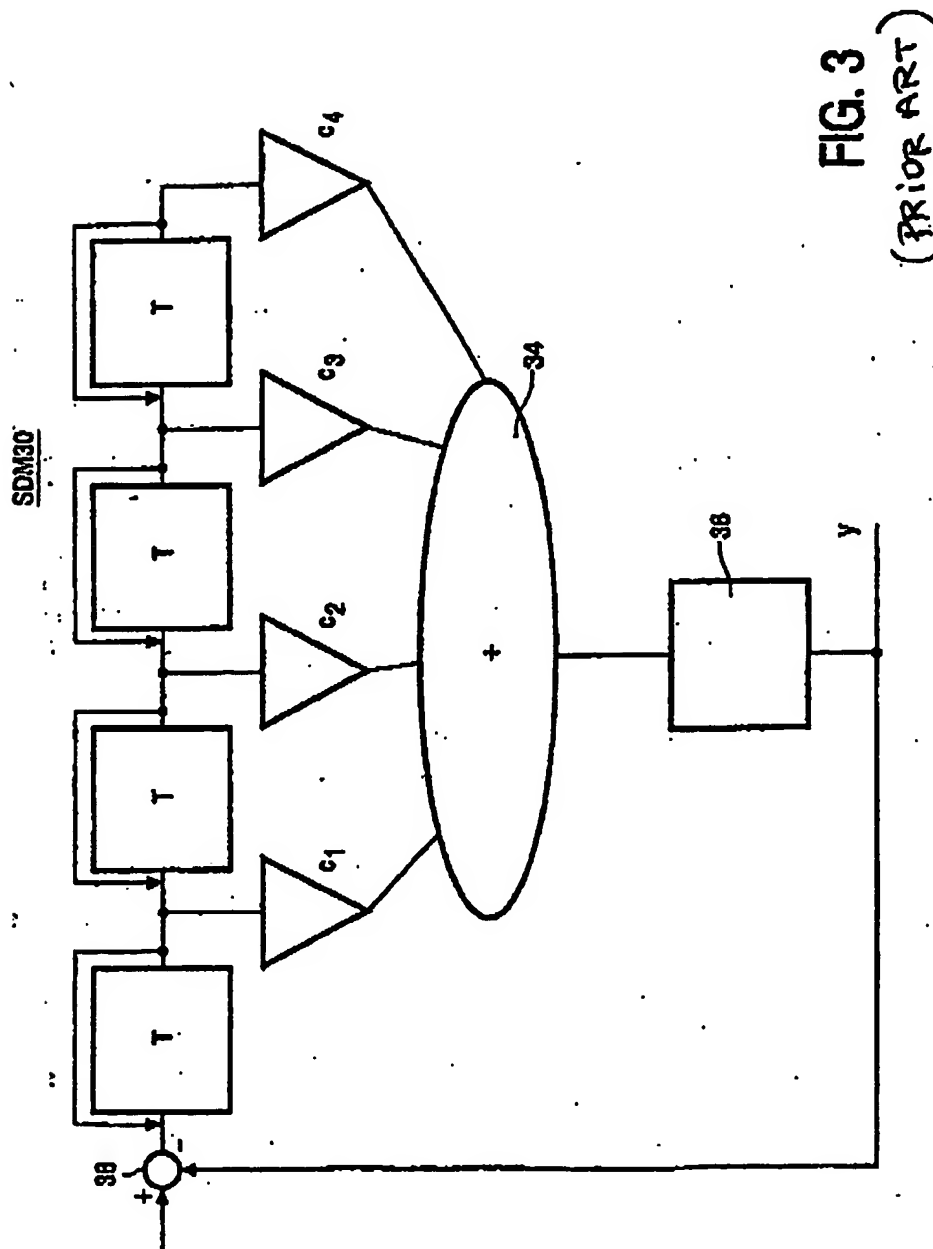


FIG. 2
(PRIOR ART)

OK TO ENTER
Patrick Wamsley
PATRICK WAMSLEY
PRIMARY EXAMINER
05/09/2006

Application No: 10/529,358
 Attorney's Docket No: NL 020908

APPENDIX A: Replacement Drawing Sheet



OK TO ENTER
Patrick Wamsley
 PATRICK WAMSLEY
 PRIMARY EXAMINER
 05/09/2006